UNCLE SAM'S AERIAL MILITIA

BALLOON AND AEROPLANE-DESTROYING GUN

THE United States will be the first nation to institute an aeronautical reserve auxiliary to its military defense, and we will owe this unique establishment to the efforts of a young millionaire, John Harry Ryan, son of Thomas F. Ryan, the southern financier, who made millions by consolidating the street railway and lighting systems of New York city. Young Mr. Ryan's scheme to consolidate all of the available aeroplanes and airships of the country in a potential fleet, similar to the naval militia, and which will be given uniform schooling by the Army Signal corps, has been approved by both the secretary of war and the secretary of the navy.

The organization of this great aerial fleet will cost the government nothing save the time of the instructing officers. The army and navy war colleges will draw plans of campaign and programs of drill to be carried out at joint maneuvers between land and air forces of defense and offense.

The officers of the new aerial militia will bear naval rather than military ranks and titles, despite the fact that the small aeronautical establishment of the regular service is officered by generals, colonels, majors and other men of army rank.

The commodore of the air fleet will be Mr. Ryan, and his chief of staff will be Clifford M. Harmon, our noted bird-man. Other prominent American aviators who have been prompt in enrolling themselves and who will receive commissions are Glenn H. Curtiss, who recently made his famous flight down the Hudson, from Albany to New York; Walter R. Brookins, who lately broke the world's distance record at Asbury Park; Greely S. Curtiss, Charles F. Willard and Ralph Johnstone. The roll will ultimately include as active members practically all the other great aviators of our country such as Hamilton, who lately made the sensational flight from New York to Philadelphia and return; the Wrights, who have just designed a new bipiane without front horizontal rudders, and our young millionaire aviators now making progress.

Recruiting work is already in progress and headquarters have been established in New York city.

Function of New Fleet.

The air fleet's monoplanes and biplanes are intended chiefly for scouting, signaling, reconnoitering and service in conjunction with dirigible balloons, where exceedingly rapid movements are needed. They will be not only more difficult to hit than military balloons, but more difficult to destroy when hit, as they can be practically riddled with missiles without being disabled until struck in some vital part of the machinery, which in comparison to the wings and planes presents very small target surface. They can also breast high winds in which dirigible balloons will not attempt to fly.

The aeroplane fleet will be divided into squadrons, it is proposed, which will be divided among our chief harbors and dockyards, for history shows that all great naval battles of the past have been fought near such points. They will probably not be used either to drop bombs on fleets or fortifications, or to attack the aerial craft of an enemy, despite the fact that these two functions are the principal ones attributed to aerial warships of the future by fiction writers, among whom warfare in the air is now a favorite theme. Military men who have studied aeroplanes in action realize that it will always be suicidal for one such craft to attempt to ram another, while the bombardment of such a vehicle in flight will be as difficult a matter as gunning for birds on the wing with an unwieldy cannon.

Bomb-Dropping Impracticable.

As to the dropping of bombs from aeroplanes, the recent experiments of Curtiss along this line are regarded by military men as having been of a negative character. Curtiss marked out an area representing the deck of a battleship, and then attempted to drop imitation bombs within it. But observers with the Russian fleet during its engagement with the Japanese can assure the commanders of our future aeronautical fleets that no bombs which an aeroplane could carry would do more than make a few harmless dents in a great man-of-war.

The aiming of a bomb from a safe height in the air involves a calculation more complicated than any popular writer on the subject seems ever to have realized. In the first place different air strata and cross-wise air currents are met every hundred feet or so, as is proved by the undulations of kite strings leading to considerable heights. In addition to being played upon by these irregular and constantly changing forces, the bomb dropped from an aeroplane will in its descent describe a curve depending on the exact velocity at which the aerial craft is going when the missile is thrown. Furthermore, altitude, velocity of the target, velocity of the falling bomb, wind velocity and direction of aeroplane—not in a single plane, as in the case of a ship, but in any of all possible directions—most all be taken into consideration.

Armored automobiles for attacking airships are now being developed by the military powers, notably Germany, which has adopted a motor vehicle heavily armored and armed with high-angle guns for firing at balloons and aeroplanes. These little land monitors weigh four tons and attain a speed of 40 miles on good roads, but our army officers do not think they would cut much figure over rough highways.

An airship field gun, which can be brought to bear in any lateral direction, and which can be elevated to an angle of 60 degrees, has been lately turned out by the Krupps. It throws a shell of 8.8 pounds. And another recent Krupp invention for use in such weapons is a flaring shell, designed to explode balloons by setting fire to their gas when striking them. Such inventions appear to be needed by nations wishing to protect themselves against war balloons.

Hard to Hit Aeroplanes.

But our aeroplane fleet will be much more difficult to hit than the dirigible balloons with which they will be operated, not only for the reasons above stated, but for additional ones not hitherto taken into consideration. M. Esnault-Pelterie, a French experimenter, on several occasions this summer stood behind his aeroplane while the propeller was going at full speed and tried to fire shots into the stern of the craft, but all of them were thrown aside by the column of air thrown back spirally by the rapidly-revolving blades. His experiments seem to indicate that aeroplane operators will be immune from a rear attack by rifle or machine gun fire.

The French are now paying $5,000 apiece for Wright biplanes and $5,000 for Farmans, while Bleriots, which were $2,000 before their maker's success in crossing the channel, immediately afterward jumped to $3,000 and are now bringing $5,000.

TO COOK CHICKENS

NEW RECIPES THAT SOUND LIKE GOOD EATING.

Boiled Chicken Mold, Broiled Cold Chicken, Scalloped Chicken and Chicken Croquettes Offer a Great Variety.

Boiled Chicken Mold.—This is an excellent dish and one which would be found most useful for a busy day. Select a fricasee fowl and have the butcher save the neck long and cut the nails from the feet. Skin these by soaking them a few minutes in hot water, dismember the rest of the fowl and boil all together until the flesh is tender enough to pick to pieces with the fingers. During the boiling, season the chicken with one large Bermuda onion, several stalks of celery, parsley, cayenne and salt. When done and cool enough to handle, pick all the flesh from the bones, feet, neck, etc., and discard the skin. Chop fine—to almost a paste—and pack in a mold, pouring in some of the boil-water between each layer of chicken. Cover tightly and set on the ice. Turn on a cold dish and serve with a trimming of canned pimentos. Only water enough to cover the chicken must be used for the boiling or the mold will not harden. The boil-water must be rich enough to form a jelly.

Broiled Cold Chicken.—Here is a good way to vary the monotony of cold fowl, whether boiled or roasted: Take the half or quarter which has not been cut into and rub it over with a marinade of two tablespoonfuls of vinegar and one of lemon juice. Put the fowl between two plates and set aside for three hours. Then rub the oil and lemon juice well into it, dip in egg and then in fine toasted crumbs; set on the ice for an hour, and broil over a medium hot fire, turning often. Make a gravy of melted butter with chopped parsley and a few drops of lemon juice and pour over the dish.

Scalloped Chicken.—Mix two cupfuls of nicely seasoned chicken, minced finely, with a cupful of boiling oyster liquor, or as much tomato juice. Stir in six chopped mushrooms, the pounded yolk of two hard-boiled eggs and two tablespoonfuls of cream. Add finely toasted bread crumbs and more cream if needed to make a soft paste. Pack in large clam shells or in a baking dish, put nuts of butter on top and cook covered for fifteen minutes; then uncover and brown lightly. Cold lamb, duck or boiled veal may be prepared in the same way, with the substitution of a good stock for the oyster or tomato juice.

Chicken Croquettes—Stir a cupful of minced cold chicken and the same quantity of sweetbreads together; these last boiled and blanched and also minced finely. Add drawn butter or a little chicken stock thickened lightly with flour. Heat in a vessel set in another containing boiling water, and when heated through take from the fire and add a cupful of cream (with a pinch of soda stirred in) and the beaten yolk of two eggs. Mix well, set in a cold place until solid; then mold in round or oblong croquettes. Dip these in beaten egg, then in crumbs and fry a rich brown in boiling cottonseed oil or lard.

Apple Butter.

Put cider into a preserving kettle and boil it until there remains only two-thirds of the original quantity of the liquid. Put into the remaining cider as many peeled and sliced apples as it will cover and boil, stirring often, until the fruit is tender. Proceed in this way until all the cider has been absorbed by the fruit, and then put the cooked apples and juice into a crock in the cellar over night. In the morning put all over the fire and boil, stirring often, to a soft, brown mass. Put away in jars or crocks.

Crabapple Jelly.

Cover crabapples with water and boil very tender; cool and strain through a cloth; measure the juice and to each cup of it allow a cupful of sugar; boil the juice for 20 minutes; then add sugar and boil until a little, put on saucer, begins to jelly; when the jelly is nearly done, add two or three geranium leaves; when pouring into glasses remove the leaves.

Marble Chocolate Cake.

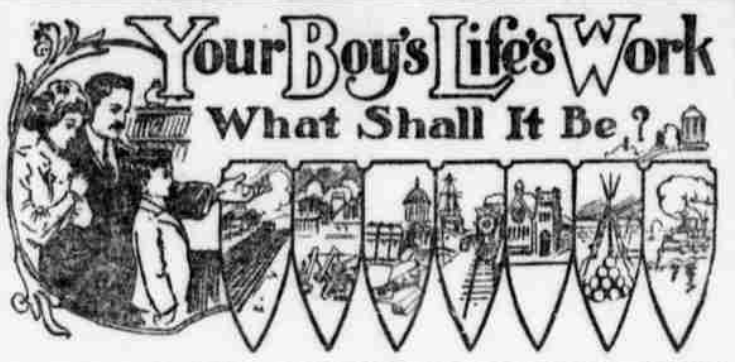
Make a batter as for white cake. Take out one teacup, add to it five tablespoons of grated chocolate, wet with milk and flavor with vanilla, pour a layer of the white batter into the baking pan, then drop the chocolate batter with a spoon, in spots and spread the remainder of the white bottom over it.

Lemon Pudding.

Soak one cup of bread crumbs in two cups of milk for one-half hour, then add one-half cup of sugar, yolks of two eggs and the grated rind of one lemon, and bake one-half hour. Beat whites of two eggs, add one cup sugar and juice of one lemon. Spread over pudding when done and slightly brown. To be eaten hot or cold.

Chicago Hot.

One peck ripe tomatoes, two cups celery, two onions, four red peppers, all chopped; one cup white mustard seed, two cups white sugar, one-half cup salt, six cups vinegar, two tablespoons whole mixed spices; drain tomatoes after chopping, then add other ingredients; cook half hour.



CARPENTER?

He'll have to start in as a carpenter's helper of the crudest sort, and his pay will be small, but in the end he may be earning his thousands a year as a building foreman or building superintendent—Also he may be getting a comfortable living as a builder on his own hook—How he may advance up the ladder of carpentry, and what are his chances of doing this, together with the pay for each step taken.

BY C. W. JENNINGS.

IF you watched some young fellow working in the cold on some half-finished building, driving nails with numbed fingers and handling frozen, rough boards, and you heard that he was getting only about $2 a day and was a carpenter's helper, there was every evidence to you that there was little more to carpentry than driving nails and putting boards together, eh, what? For you know that the plans of the building were prepared by an architect, and therefore, supposed that all the carpenter had to do was to follow them, which "anybody could do that knew enough to handle a hammer and a saw." As for brain work being required in carpentry, you never imagined such a thing. It would be one of the last occupations, possibly, that you would choose for your boy.

But it is never safe to generalize, in this instance particularly; for that same carpenter's helper, if he possessed average intelligence and ambition would in all likelihood be foreman of carpenters within a very few years, and would have a big career in front of him. It all would depend upon his application. Given grit and ambition, a boy can work up through the carpenter's trade to comparative eminence, as well as through most better known lines of work. It requires hard work; but what occupation does not require hard work to reach success?

After you have thought over it for a while and learned a few things about it, you might do worse than start your boy in this trade. How to go about it and the requirements?

Well, there are few preliminary requirements to speak of further than that the applicant should be a reasonably healthy boy of about 16 or more, and have had some rudimentary schooling. Go to a boss carpenter at work somewhere and ask him for a job. If you are successful, as you will be after seeing a few bosses, your boy will be put to work as helper at somewhere round $5 a week. This work will not be carpentering. The boy knows nothing about it yet, you know, except that he can probably tell a hammer from a square, and he has to learn before he can become one.

And so, for the first year, he will be nothing more than the crudest kind of assistant to one of the carpenters—carrying boards and running errands, and after a while, probably sawing off the ends of rough lumber and nailing on joists and scantling. The work will be generally the same if the boy goes into a factory and does what is generally known as inside work, and in the latter he will be advanced at the end of the first year to probably $7 a week, and be set at bench work, nailing moldings, putting window frames together, etc.

At the end of the second year there will be another promotion to probably $1.50 a day (pretty good pay for a boy of 18 who is learning a trade), when he will be a sort of first assistant to one of the master carpenters and be doing pretty advanced things, practically the same work, except the most particular, that a master does, though, of course, under the latter's direct supervision. His pay will go up a little, probably to $1.75 a day.

Having served these three years he will be obliged to go into the carpenters' union. The union will be holding out persuasions before this; but, generally speaking, in most cities it is not necessary to join the union till after three years' preparatory work. Your boy's standing in the union will be that of apprentice, which will continue for two years. His pay will be $2 a day, and his work, if inside, will be making doors, sash and blinds, mantels, wainscoting, etc., and, outside, the general work of carpentry on buildings.

After these five years of preparation, your boy will have finished his course of training and be known as a full-fledged master carpenter, able to do any of the work that any carpenter of that stage is capable of, and his pay will be around $4 a day of eight hours for inside work, and $1 more when employed on the outside. And all this by the time he comes of age at 21. There are few occupations that offer returns as large as this to young men.

Advancement from here on to higher positions depends, as a rule, on much more than has been learned in the routine work your boy has followed during his apprenticeship. He will have realized long before the end of his first five years that he must devote his time to outside study and practice if he expected to get into higher positions, and will have been burning midnight oil for a long while.

There is a wide difference between a mere carpenter and a carpenters' foreman—so great a difference that one cannot become a foreman, except in most exceptional cases, without having acquired a fair working knowledge of mechanical drawing; and to be a regular building foreman, in charge of the workmen on large buildings, much more is necessary. A regular inside carpenters' foreman is paid from $6 to $8 a day; and after a very few years, if an opening occurs, he is apt to be made superintendent of the particular plant he works for at a regular salary of $2,000 to $2,500, or even $3,000 annually. This position, however, is about the end of possible advancement at inside work, except he should become a member of the firm.

A building foreman who occupies a still higher position should have a good working acquaintance with geometry and mensuration, excavating, shoring and piling, footings and foundations, the mechanics of carpentry, joinery, stair building, builders' hardware, roofing, mill design and also know something of building stone, stone masonry, concrete construction, lathing, plastering, tiling, brickwork, roofing, sheet metal work, fireproofing, etc.

All this sounds like a formidable list—reads like taking a college course, you may think, but will not be so difficult for an ambitious boy; for evening study and practical application of what he has learned at every opportunity during his work, if persisted in for years, will enable him to acquire it all and to be fully competent to take the responsible position when it is offered to him.

You can see the advancement from here on as straight and clear as can be; for the building foreman on large and important work, who is paid $3,000 or $4,000 a year, is too responsible a man to be lost sight of and will be given the first opening as superintendent that happens along, and before many years will find himself in a sort of general superintendent over other superintendents in charge of the construction of numerous establishments. He can take a specialty if he wishes and become a constructing engineer; for there are numerous routes to high success from responsible foremanships, and the pay is ample to satisfy anybody.

If he chooses your boy can get himself into business for himself; for a skilled carpenter is quite competent to take the erection of a small frame house, and this will give him his independent start.

All building trades are pretty much alike in general features and pay and hours, and will bring the young worker to about the same position as superintendent. Some of the other trades are different, however, and will be taken up in future articles.

(Copyright, 1910, by the Associated Literary Press.)

Unique Old French Village.

Lying so much off the beaten track, the village of Port Lesne in the Jura department of France is visited by but few from the outside world, and consequently this tiny community of men and women of color is but little known. It is not a large village, for its inhabitants number but little more than a hundred, but every one is either black, or of copper color or palish yellow. It owes its origin to the fact that about a century ago the famous negro chief, Toussaint-L'Ouverture, was brought from Hayti and imprisoned in Fort de Joux. Many of his friends, all negroes, followed him and encamped near his prison on the bank of the little river Loue. From that encampment grew the village of Port Lesne, and when Toussaint-L'Ouverture died more than a hundred years ago his friends decided to remain in France. The passing of years and intermarriages have transformed the settlement into a French village of colored folk, all of whom have the vote. Port Lesne is thus probably the most unique spot in all France.

Government Dam in the Hudson.

The dam which the United States government is planning to construct at Troy across the Hudson river will wipe out a number of factories and mills in that region by using water power. The head furnished by the dam will be utilized to generate about 6,000-horse power, and this will be sold to the mills and factories at cost. However, the companies will be required to pay the cost of building the power house. It is estimated that the amount of power utilized will be three times as much as has heretofore been employed.—Scientific American.

Boston's Good Sense.

"Boston wants Walter Wellman to fly from that city."

"I should think it would."